

WHAT IS CLAIMED AS THE INVENTION IS:

1. A holder for a tool bit, the holder comprising:

5 a body having mounting means for securing a proximal end of said body to a driving tool, and a blind axial hole at a distal end thereof for receiving said tool bit, at least a portion of said axial hole having a cross-section corresponding to a corresponding cross-section of said tool bit when said tool bit is inserted in said axial hole;

10 a locking means engaging at least a portion of said tool bit when said tool bit is fully inserted into said axial hole;

a collar mounted around at least a portion of said body, slidable along said body between a bit-locking position and a bit-unlocking position, moving said collar from said bit-locking position freeing said bit from engagement by said locking means;

15 a spring mounted between said body and said collar to bias said collar towards said bit-locking position;

initial insertion of said bit into said axial opening resulting in said bit contacting means arranged to cause displacement of said collar away from said bit-locking position to allow further insertion of said bit, full insertion of said bit then allowing said locking means to engage said bit and said collar to move back to said bit-locking position.

20 2. A holder as recited in claim 1, wherein said initial insertion of said bit into said axial opening brings said bit into contact with said locking means, causing displacement of said locking means, displacement of said locking means causing displacement of said collar away from said bit-locking position to allow further insertion of said bit.

25 3. A holder as recited in claim 1, wherein said locking means comprises a washer within said axial opening, biased by a spring towards a position which is tilted from a transverse plane, said washer having an axial opening to accommodate said bit snugly when said washer is in said tilted position, and to allow said bit to be inserted or removed
30 freely when said washer is moved towards said transverse plane, moving said collar from

said bit-locking position causing movement of said washer towards said transverse plane.

4. A holder as recited in claim 1, wherein said locking means comprises at least one
5 locking ball arranged in a hole in said body, movable transversely between a locking
position where said locking ball extends partially into said axial hole, and an unlocked
position where said locking ball does not extend into said axial hole, said collar having
means preventing movement of said locking ball from said locking position when said
collar is in its bit-locking position, movement of said locking ball to said unlocked position
10 being permitted when said collar is in its bit-unlocking position, said bit having a groove
to receive said locking ball when fully inserted.

5. A holder as recited in claim 1, wherein said locking means comprises a transition
element projecting into said axial hole, said transition element arranged to be contacted
15 by said bit upon insertion, so as to act against said collar to move said collar towards
said bit-locking position as said bit becomes fully inserted.

6. A holder as recited in claim 5, wherein said locking means comprises at least one
locking ball arranged in a hole in said body, movable transversely between a locking
20 position where said locking ball extends partially into said axial hole, and an unlocked
position where said locking ball does not extend into said axial hole, said collar having
means preventing movement of said locking ball from said locking position when said
collar is in its bit-locking position, movement of said locking ball to said unlocked position
being permitted when said collar is in its bit-unlocking position, said bit having a groove
25 to receive said locking ball when fully inserted.

7. A holder as recited in claim 5, wherein said locking means comprises at least one
locking pin arranged in a hole in said body, movable transversely between a locking
position where said locking pin extends partially into said axial hole, and an unlocked
30 position where said locking pin does not extend into said axial hole, said collar having
means preventing movement of said locking pin from said locking position when said

collar is in its bit-locking position, movement of said locking pin to said unlocked position being permitted when said collar is in its bit-unlocking position, said bit having a groove to receive said locking pin when fully inserted.

5 8. A holder as recited in claim 1, wherein said locking means comprises at least one
rocker arm arranged in a hole in said body, movable transversely between a locking
position where a first end of said rocker arm extends partially into said axial hole, and an
unlocked position where said first end of said rocker arm does not extend into said axial
hole, said collar having means preventing movement of said rocker arm from said locking
10 position when said collar is in its bit-locking position, movement of said rocker arm to
said unlocked position being permitted when said collar is in its bit-unlocking position,
said bit having a groove to receive said first end of said rocker arm when fully inserted,
said rocker arm having a second end which is contacted by said bit when nearly fully
inserted, to pivot said rocker arm to urge said first end to said locking position.

15

9. A holder as recited in claim 1, wherein said tool bit is a double-ended tool bit
comprising a drill bit mounted in one end thereof and a screwdriver bit mountable in an
opposite end thereof.

20

10. A holder as recited in claim 2, wherein said tool bit is a double-ended tool bit
comprising a drill bit mounted in one end thereof and a screwdriver bit mountable in an
opposite end thereof.

25

11. A holder as recited in claim 3, wherein said tool bit is a double-ended tool bit
comprising a drill bit mounted in one end thereof and a screwdriver bit mountable in an
opposite end thereof.

30

12. A holder as recited in claim 4, wherein said tool bit is a double-ended tool bit
comprising a drill bit mounted in one end thereof and a screwdriver bit mountable in an
opposite end thereof.

13. A holder as recited in claim 5, wherein said tool bit is a double-ended tool bit comprising a drill bit mounted in one end thereof and a screwdriver bit mountable in an opposite end thereof.

5 14. A holder as recited in claim 7, wherein said tool bit is a double-ended tool bit comprising a drill bit mounted in one end thereof and a screwdriver bit mountable in an opposite end thereof.

10 15. A holder as recited in claim 1, further comprising a spring-biased ejection means arranged to act against the inserted end of said bit when said collar is moved to said bit-unlocking position, whereby said bit is ejected from said holder.

15 16. A holder as recited in claim 1, wherein said portion of said axial hole having a cross-section corresponding to a corresponding cross-section of said tool bit when said tool bit is fully inserted in said axial hole, is a proximal end portion of said hole, the proximal end portion of said tool bit having a corresponding shape.

20 17. A holder as recited in claim 1, wherein said body is in at least two parts, including a base part having said mounting means for securing a proximal end of said body to a driving tool, and a second part secured to said base part having said axial hole, made blind by said base part.

25 18. A holder as recited in claim 1, wherein said body is in at least two parts, including said mounting means being a separate part from the rest of said body, suitably secured to said body.